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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
[illegible]	[illegible]	[illegible]	[illegible]

MM91/1107

ROBERT C BAIN
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EXAMINER	
[illegible]	
ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 11/07/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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PTO-90C (Rev. 2/95)
*U.S. GPO: 2000-473-000/44602

1- File

Office Action Summary	Application No.	Applicant(s)	
	09/429,641	CLARK, BRETT G.	
	Examiner	Art Unit	
	Jared J. Fureman	2876	

-- The MAILING DATE of this communication appears on th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-40 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-40 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-4 .
4) ☒ Interview Summary (PTO-413) Paper No(s). 6 .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 7-17, 19-31, 33-37, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al (US 5,386,490, cited by applicant) in view of Fujikura LTD et al (JP 11-119067, cited by applicant).

Re claims 1-3, 5, 7, 12-14, 17, 19, 24, 25, 28-31, 33-37, 39, and 40: Pan et teaches an apparatus (control unit 11) for receiving splice data for each of a plurality of optical fiber splices, each of the plurality of optical fiber splices being uniquely identified by at least one of a plurality of splice numbers (coupler number), the apparatus comprising: a data interface (connected to optical fibers 12) for receiving the splice data, and a data storage device (a database for storing fabrication data files) coupled with the data interface, for receiving the splice data and the splice number from the data interface and for storing the splice data and the splice indicia, wherein the data storage device stores the splice data and the splice number such that, for each of the optical fiber splices, the splice data and the splice number for a respective optical fiber splice are stored together in a unique data record (fabrication data file), the apparatus is coupled with a splicer (operations unit 10 including heat and fusion subsystem 50), wherein the data interface includes a splicer input interface configured to receive the

splice data from a splicer, the splice data includes manufacture date associated with each of the optical fiber splices, the plurality of optical fiber splices are uniquely defined by the plurality of splice numbers within a particular optical fiber system, the splice data includes information (station ID, operator ID) representing a cross reference between one of the plurality of optical fiber splices (one of the particular optical fiber splices made at the particular station by a particular operator) and another one of the plurality of optical fiber splices (another one of the particular optical fiber splices made at the same station by the same operator), a processor (the control unit 11 necessarily includes a processor) coupled with the data storage device for retrieving from the data storage device the splice data associated with the selected splice indicium, an output data interface including a data port for outputting (printing, see figure 9B) the splice data, a display (monitor 13) coupled with the output data interface for displaying the splice data (see figures 1-3, 9A, 9B, column 1 lines 51-56, column 2 lines 25-44, column 3 lines 4-7, column 4 line 45 - column 5 line 51, and column 8 line 49 - column 9 line 9).

While Pan et al teaches the use of a unique coupler number for each optical fiber splice (see figure 9A), Pan et al fails to specifically teach each of the optical fiber splices being uniquely identified by at least one of a plurality of splice indicia (the optical fiber splice having indicia thereon).

Fujikura LTD et al teaches the use of an optical fiber indicia (a sheet S printed with bar code M is adhered to an optical fiber F) (see figures 1-6, and the translation of the abstract).

In view of Fujikura LTD et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Pan et al, each of the optical fiber splices being uniquely identified by at least one of a plurality of splice indicia (the optical fiber splice having indicia thereon), in order to provide machine readable identification of the optical fiber splice, thereby simplifying identification of the optical fiber splice and recall of stored information (the fabrication data file).

Re claims 4, 8-11, 15, 16, 20-23, 26, and 27: The teachings of Pan et al as modified by Fujikura LTD et al have been discussed above.

Pan et al as modified by Fujikura LTD et al fails to specifically teach a storage medium removably connectible with the data storage device, the splice data and the splice indicia being stored on the storage medium, a bar code reader coupled with the data interface for reading the splice indicia, an optical wand coupled with the data interface for reading the splice indicia, the data interface including an electronic memory device input interface and an electromagnetic probe connected to the electronic memory device input interface for reading the splice indicia from a memory of an electronic memory device, the data storage device comprising a memory chip, an external storage device interface coupled to the data interface, a housing containing at least a portion of the data interface and at least a portion of the data storage device, the external storage device interface being configured to receive the splice data and the splice indicia from an external storage device external to the housing, a keyboard

coupled with the input data interface, utilizing a wireless transmitter for wirelessly transmitting the splice data and the splice indicia to the external storage device.

However, Official Notice is taken that at the time of the invention it was well known to those of ordinary skill in the art to utilize a storage medium removably connectible with a data storage device (such as a floppy disk drive, magnetic tape drive, etc. connected to a computer), use a bar code reader or optical wand coupled to an interface for reading bar codes, utilize an electronic memory device input interface and an electromagnetic probe connected to the interface for reading data from an electronic memory device, utilize a memory chip as a data storage device, utilize an external storage device, utilize a housing to contain devices, utilize a keyboard coupled to an interface, and utilize a wireless transmitter to transmit data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Pan et al as modified by Fujikura LTD et al, a storage medium removably connectible with the data storage device, the splice data and the splice indicia being stored on the storage medium, a bar code reader coupled with the data interface for reading the splice indicia, an optical wand coupled with the data interface for reading the splice indicia, the data interface including an electronic memory device input interface and an electromagnetic probe connected to the electronic memory device input interface for reading the splice indicia from a memory of an electronic memory device, the data storage device comprising a memory chip, an external storage device interface coupled to the data interface, and a housing containing at least a portion of the data interface and at least a portion of the

data storage device, the external storage device interface being configured to receive the splice data and the splice indicia from an external storage device external to the housing, a keyboard coupled with the input data interface, utilizing a wireless transmitter for wirelessly transmitting the splice data and the splice indicia to the external storage device, in order to provide a removable/replaceable storage device thereby allowing the data storage device to be archived and stored in a secure location, provide machine readable input which is more efficient and reliable than human input information, provide greater storage space for indicia by providing an electronic memory device which is an art recognized functional equivalent of a bar code, to provide a housing for protecting the devices from their environment, to allow manual entry of splice indicia in the event that the splice indicia is damaged and not machine readable, and to allow greater flexibility by using a wireless transmitter thereby eliminating the need for a cabled connection.

3. Claim 6, 18, 32, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al as modified by Fujikura LTD et al as applied to claims 1, 13, 29, and 35 above, and further in view of Hishikawa et al (US 6,206,583).

Pan et al also teaches the use of a camera 91 for monitoring and displaying the optical fiber splice (see figures 2, 3, and column 4 lines 45-52).

Pan et al as modified by Fujikura LTD et al fails to specifically teach the splice data including image data representing images of at least a portion of each of the optical fiber splices.

Hishikawa et al teaches an apparatus (splicer 1) for receiving splice data for each of a plurality of optical fiber splices, the splice data including image data representing images of at least a portion of each of the optical fiber splices (see figures 1, 2, column 1 lines 52-67, column 3 lines 22-29, and column 3 line 36 - column 4 line 11).

In view of Hishikawa et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Pan et al as modified by Fujikura LTD et al, the splice data including image data representing images of at least a portion of each of the optical fiber splices, in order to provide the ability to detect defects in the splice and/or defects in the operation of the splicer.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Clark (US 6,282,353) teaches an optical fiber splice including splice indicia. Hamada et al (JP 4-101107) and Hishikawa (JP 10-282358) both teach an optical fiber splicing apparatus, which store images of at least a portion of an optical fiber splice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared J. Fureman whose telephone number is (703) 305-0424. The examiner can normally be reached on 7:00 am - 4:30 PM M-F, first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (703) 305-3503. The fax phone numbers

for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

jjf
November 2, 2001

KARL D. FRECH
PRIMARY EXAMINER